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appearance, location, color, type, shape and functionality may be conceptually related to the module or system theme (such as image or shape).

In one particular example, the invention can be applied to control and automation, such as industrial control, robotics, factory automation and other similar applications, wherein the control is based on a sequence of events such as a finite state machine. For example, the system can be used as a substitute or a supplement to a PLC (Programmable Control Logic). Most control system involves programming language stored in software (or firmware) and executed by a processor in order to set (or program) or to execute the required set of controlling steps. One example is ladder logic or C language. Updating or changing such software requires skill and expertise, added to various programming tools, and thus expensive and complex to a lay person. Further, since the software is not directly visible, the programmed control steps are hidden to the user. The system according to the invention can be used to 'program' a process by connecting or attaching various modules, each associated with a different functionality of control step. Such system forming (as well as its modifications) is easy and intuitive, and does not require any expertise, skill or special tools. Further, the control steps involved are apparent by the type of modules used and their location in the system and in respect to each other. The formed control system may be used for home entertainment and control applications such as smart lighting, temperature control, safety and security, for home awareness applications such as water sensing and control, power sensors, energy monitoring, smoke and fire detectors, smart appliances and access sensors, for commercial building automation such as energy monitoring, HVAC, lighting and access control, and for industrial applications such as process control, asset management, environmental management, and industrial automation.

All publications, patents, and patent applications cited in this specifications are herein incorporated by reference as if each individual publication, patent, or patent application were specifically and individually indicated to be incorporated by reference and set forth in its entirety herein.

Throughout the description and claims this specifications the word "comprise" and variations of that word such as "comprises" and "comprising", are not intended to exclude other additives, components, integers or steps.

Those of skill in the art will understand that the various illustrative logical blocks, modules and circuits described in connection with the embodiments disclosed herein may be implemented in any number of ways including electronic hardware, computer software, or combinations of both. The various illustrative components, blocks, modules and circuits have been described generally in terms of their functionality. Whether the functionality is implemented as hardware or software depends upon the particular application and design constraints imposed on the overall system. Skilled artisans recognize the interchangeability of hardware and software under these circumstances, and how best to implement the described functionality for each particular application.

Although exemplary embodiments of the present invention have been described, this should not be construed to limit the scope of the appended claims. Those skilled in the art will understand that modifications may be made to the described embodiments. Moreover, to those skilled in the various arts, the invention itself herein will suggest solutions to other tasks and adaptations for other applications. It is therefore desired that the present embodiments be considered in all respects as illustrative and not restrictive, refer-

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ence being made to the appended claims rather than the foregoing description to indicate the scope of the invention.

It will be appreciated that the aforementioned features and advantages are presented solely by way of example. Accordingly, the foregoing should not be construed or interpreted to constitute, in any way, an exhaustive enumeration of features and advantages of embodiments of the present invention.

The present invention may be embodied in other specific forms without departing from its spirit or essential characteristics. The described embodiments are to be considered in all respects as illustrative and not restrictive. The scope of the invention is, therefore, indicated by the appended claims rather than by the foregoing description. All changes that come within the meaning and range of equivalency of the claims are to be embraced within their scope.

The invention claimed is:

1. A first device for electrically connecting and detachably attaching to a second device and to a third device that are identical to the first device, the first device having first and second ends and comprising:

a first electromechanical connector at the first end of the first device, the first electromechanical connector being physically structured to be electrically connectable and detachably mechanically couplable to a second electromechanical connector of the second device;

a second electromechanical connector at the second end of the first device, the second electromechanical connector being physically structured to be electrically connectable and detachably mechanically couplable to a first electromechanical connector of the third device; an annunciator adapted to perform a module-specific task coupled to be electrically Direct Current (DC) powered from the first electromechanical connector of the first device; and

firmware and a processor for executing instructions embedded in the firmware, the processor being coupled to be electrically Direct Current (DC) powered from the first electromechanical connector of the first device and to control the annunciator in response to a command received from first electromechanical connector,

wherein each of the first and second electromechanical connectors comprises two Direct Current (DC) power contacts and a signal contact, so that when the first device is mechanically connected to the second and third devices, DC power is passed by the respective electromechanical connectors from the second device to the third device via the first device.

2. The device according to claim 1, wherein the DC contacts of the first electromechanical connector are connected to the DC contacts of the second electromechanical connector.

3. The device according to claim 1, wherein the processor is coupled to the signal contact of the first electromechanical connector to receive a first signal therefrom, and to the signal contact of the second electromechanical connector to transmit a second signal thereto, whereby when the first device is mechanically connected to the second and third devices, the first signal is received from the second device using a point-to-point connection and the second signal is transmitted to the third device using a point-to-point connection.

4. The device according to claim 3, further comprising an unbalanced line receiver coupled to the signal contact of the first electromechanical connector to receive the first signal therefrom, and a mating unbalanced line driver coupled to